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Eugene Thomas Bond

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EXAMINER

HOEL, MATTHEW D

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/720,042	Applicant(s) BOND, EUGENE THOMAS	
	Examiner Matthew D. Hoel	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 68-103 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 68-103 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/15/00; 01/28/05</u> . | 6) <input checked="" type="checkbox"/> Other: <u>IDS, 07/26/05</u> . |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 68 to 88 and 94 to 103 are rejected under 35 U.S.C. 102(e) as being anticipated by Alcorn, et al. (U.S. patent 5,643,086 A).

3. As to Claim 68: '086 teaches a system for verifying at least one digital medium in a gaming machine (Abst.), said system comprising: an authentication agent, wherein said authentication agent is external to said gaming machine and further wherein said authentication agent (external gaming authority, 2:27-32, 3:13-21, 6:47-56): transmits a verification algorithm to said gaming machine; receives from said gaming machine an outcome of said verification algorithm; compares said received outcome with an expected outcome; and authenticates said gaming machine if said received outcome matches said expected outcome (Figs. 4 & 5).

4. As to Claim 75: '086 teaches method for verifying at least one digital medium (Abst., Fig. 1) in a system including gaming machine and an external authentication agent (external gaming authority, 2:27-32, 3:13-21, 6:47-56), said method comprising:

transmitting a verification algorithm to said gaming machine from said external authentication agent to said gaming machine; deriving an outcome of said verification algorithm by execution thereof; comparing said derived outcome with an expected outcome; and authenticating said gaming machine if said derived outcome matches said expected outcome (play permitted if authenticated, Figs. 4 & 5).

5. As to Claim 79: '086 teaches gaming device comprising: a gaming controller (Abst., Fig. 1); a data storage device storing data files and data corresponding to a valid verification signature (Fig. 2); an apparatus for loading data external from said gaming machine to said storage device, said apparatus transmitting an authentication agent (external gaming authority, 2:27-32, 3:13-21, 6:47-56); and a processor to process said authentication agent to derive a verification signature and compare said derived signature to said valid signature (Figs. 4 & 5).

6. As to Claim 80: '086 teaches method for presenting at least one game to a player at a gaming machine (Abst., Fig. 1; player permitted to play or not, Figs. 4 & 5), said method comprising: storing at least one of program code and program data in a digital medium (Figs. 1 & 2); transmitting via a communication link at least one of a program code or program file data and data corresponding to a verification algorithm to said gaming machine from an authentication agent (external gaming authority, 2:27-32, 3:13-21, 6:47-56); processing said verification algorithm to derive an outcome and comparing said outcome to one of an authorized outcome stored in said digital medium or transmitted with said algorithm and authorizing said transmitted program code or program file data if said derived and stored outcomes compare (Figs. 4 & 5).

7. As to Claim 88: '086 teaches a system for verifying at least one digital medium in at least one gaming machine (Abst., Figs. 1 & 2, actual verification done in Figs. 4 & 5), said system comprising: a directory providing information used in at least one of management, retrieval and authentication of programs and data (directory comprising of loaders which load loadable data set, Fig. 2); and an authentication engine for authenticating programs and data based on information from said directory and a verification signature (Figs. 4 & 5).

8. As to Claim 95: '086 teaches a system for monitoring a gaming machine (Abst., Fig. 1), said system comprising: a regulating agent for monitoring at least a portion of said gaming machine, wherein said regulating agent generates a request for an authentication agent (external gaming authority, 2:27-32, 3:13-21, 6:47-56), and wherein said authentication agent is configured to: compare a received outcome from a verification algorithm at said gaming machine with an expected outcome; and authenticate said gaming machine if said received outcome matches said expected outcome (Figs. 4 & 5).

9. As to Claim 69: The system of claim 68, wherein an external agent prompts said gaming machine to request and execute said verification algorithm for said at least one digital medium and enrolls said gaming machine when said received outcome matches at least one of a set of predetermined criteria (game play permitted if match exists, Fig. 5, '086).

10. As to Claim 70: The system of claim 68, wherein the request and execution of said verification algorithm is carried out based on at least one of a request of said

gaming machine, a request of a player of said gaming machine, a request of an authorized agent, and upon a randomly or periodically scheduled event ('086, external gaming commission, 3:22-33).

11. As to Claim 71: The system of claim 68, further comprising a data structure configured to historically store said received outcome ('086, log of game play, credits, diagnostic information, 6:20-26).

12. As to Claim 72: The system of claim 68, wherein said verification algorithm comprises a verification signature ('086, Figs. 4 & 5).

13. As to Claim 73: The system of claim 68, further comprising a processor configured to process said verification algorithm to determine at least one of corruption of said at least one digital medium and tampering with said at least one digital medium (unalterable ROM, authentication of Figs. 4 & 5 is thus checking for tampering, 2:35-41, '086).

14. As to Claim 74: The system of claim 68, wherein said authorization agent is remote to said gaming machine and further comprising a communication link between said authorization agent and said gaming machine for transmission of said verification algorithm to said gaming machine ('086, 3:13-33).

15. As to Claim 76: The method of claim 75, further comprising prompting said gaming machine to request and execute said verification algorithm for said at least one digital medium and enrolling said gaming machine when said received outcome matches at least one of a set of predetermined criteria (game play permitted if match exists, Fig. 5, '086).

16. As to Claim 77: The method of claim 75, further comprising requesting and executing said verification algorithm based on at least one of a request of said gaming machine, a request of a player of said gaming machine, a request of an authorized agent, and upon a randomly or periodically scheduled event ('086, external gaming commission, 3:22-33).

17. As to Claim 78: The method of claim 75, further comprising storing any received outcome from a gaming machine for recollection thereof ('086, digests transmitted to gaming commission for audit purposes, 8:22-25,54-62).

18. As to Claim 81: The method of claim 80, wherein a player is unable to play said at least one game until receipt of said authentication result ('086, Abst.; 8:22-26).

19. As to Claim 82: The method of claim 80, further comprising requesting said authentication result upon a player attempting to execute a game ('086, Fig. 5, 8:1-25, authorization routine called).

20. As to Claim 83: The method of claim 80, further comprising providing at least one of program code and program data as a game configured for downloading to said gaming machine, said gaming machine requesting said authentication result upon download of a game to said gaming machine ('086, authentication done when data downloaded to game device, 3:13-33; preparation phase, 2:42-57).

21. As to Claim 84: The method of claim 80, further comprising an agent external to said gaming machine triggering transmission of said verification algorithm data and at least one of a program code or program file data ('086, external gaming commission, 3:22-33).

22. As to Claim 85: The method of claim 80, further comprising registering said outcome for an audit ('086, 8:54-62).

23. As to Claim 86: The method of claim 80, further comprising transmitting said verification algorithm data as a verification signature ('086, Figs. 4 & 5).

24. As to Claim 87: The method of claim 80, further comprising processing said verification algorithm for identification of at least one of corruption of said at least one digital medium and tampering with said at least one digital medium (unalterable ROM, authentication of Figs. 4 & 5 is thus checking for tampering, 2:35-41, '086).

25. As to Claim 94: The system of claim 88, further comprising a loader for retrieving and verifying integrity of data and programs stored on said at least one digital medium ('086, loader programs, Fig. 2; verification, Figs. 4 & 5).

26. As to Claim 96: The system of claim 95, wherein said authentication agent is configured to: transmit a verification algorithm to said gaming machine; and receive from said gaming machine an outcome of said verification algorithm ('086, remote verification, 8:1-25, Figs. 4 & 5).

27. As to Claim 97: The system of claim 95, wherein said regulating agent is an external agent located remotely from said gaming machine and remotely monitors at least a portion of said gaming machine ('086, remote verification by external agent, 3:13-33).

28. As to Claim 98: The system of claim 95, wherein said regulating agent monitors all of said gaming machine, and wherein said authentication agent verifies the integrity of said gaming machine ('086, 3:13-33).

29. As to Claim 99: The system of claim 95, wherein said authentication agent is configured to verify that said gaming machine satisfies local gaming regulations ('086, gaming commission audits, 8:54-62).

30. As to Claim 100: The system of claim 95, wherein said regulating agent monitors software and peripheral devices of said gaming machine ('086, all memory devices in architecture checked, 3:55-67).

31. As to Claim 101: The system of claim 95, wherein data is transferred if said received outcome matches said expected outcome ('086, 8:1-25, external gaming authority, 2:27-32, 3:13-21, 6:47-56).

32. As to Claim 102: The system of claim 95, wherein said verification algorithm detects tampering or rigging of software within said gaming machine ('086, 8:1-25).

33. As to Claim 103: The system of claim 95, wherein said authentication agent authenticates data stored on a digital medium in said gaming machine ('086, 8:1-25, Figs. 4 & 5).

Claim Rejections - 35 USC § 103

34. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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35. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

36. Claims 89 to 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over '086 in view of Fukushima, et al. (EPO publication 0 464 811 A2, application 91111079.9).

37. As to Claim 89: '086 discloses all of the limitations of Claim 89, but lacks specificity as to the directory comprising a virtual programmable read only memory (V-PROM). '811, however, discloses a virtual programmable read-only memory (Abst.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the V-PROM of '811 to the gaming device of '086. One of '811's goals is to give the user some ROM space when only a limited amount of ROM space is given to the user (3:22-37). The V-PROM is allocated on an otherwise recordable disk (3:38-4:44). The examiner notes that '086 has ROMs 29 and 30 in Fig. 2. These ROMs store system initialization code, an authentication program, a random number generator program, loader programs, an operating system program, system drivers, a message digest program, a decryption program, and a decryption key. These ROMs will, of course, be much smaller than the mass storage unit containing 36 and 37. This combination would allow the ROMs 29 and 30 to be implemented on the same mass

storage device as 36 and 37. This would have the effect and advantage of reducing the cost of the gaming device by requiring only one storage device outside of RAM. The ROMs 29 and 30 could for example be implemented as partitions on a mass storage device; 29, 30, 36, and 37 could all be implemented for example as separate drive partitions on the mass storage device, so the BIOS would read them as ROMs since they would be implemented as V-PROMs. This would have the further advantage of allowing the contents of 29 and 30 to be upgraded as needed without replacing ROM chips on a circuit board. They could even be upgraded with the method of '086.

38. As to Claim 90: The system of claim 88, wherein said V-PROM includes a registry that logically groups discrete data and program entities (loader programs of '086 Fig. 2 know locations of loadable data set application programs 36).

39. As to Claim 91: The system of claim 90, wherein said V-PROM registry stores electronic programmable read only memory (EPROM) grouping information in a relational database (loader programs of '086 Fig. 2 know locations of loadable data set application programs 36).

40. As to Claim 92: The system of claim 90, wherein said V-PROM registry abstracts a type of said at least one digital medium to allow use of a variety of digital storage media with said authentication engine ('086 authenticates a variety of storage devices within the system: system boot ROM, memory devices containing the operating system, system drivers, executive loader programs, 3:58-66).

41. As to Claim 93: The system of claim 89, wherein said V-PROM is programmed to determine which program files and which data files are related and to group said related

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program files and data files in a logical manner (loader programs of '086 Fig. 2 know locations of loadable data set application programs 36).

Conclusion

42. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aristocrat Leisure Industries, Pty. Ltd. teaches virtual EPROMs in WIPO publication WO 99/67721 A1. Bally Gaming International, Inc. in EPO publication 0 360 613 A2, application 89309659.4, teaches authenticating data downloaded to a gaming device. Aristocrat Leisure Industries, Pty. Ltd. teaches networked gaming devices in WO 98/40140 A1, WO 98/35309 A1 (Derwent Abstract), and WO 96/21974 A1; security systems in WO 96/21916 A1 (Derwent Abstract); and memory devices in WO 96/24900 A1 and WO 98/00818 A1. U.S. patents 6,527,638 B1; 6,620,047 B1; 6,071,190 A; 6,106,396 A; 6,210,274 B1; 6,149,522 A; 7,217,190 B2; 6,986,055 B2; RE39,370 E; RE39,400 E; RE39,401 E; RE39,368 E, RE39,369 E; 6,968,405 B1; 5,923,249 A; 5,700,195 A; 5,707,286 A; and 6,264,561 B1 teach gaming security methods around the time of the applicant's priority date.

43. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Hoel whose telephone number is (571)272-5961. The examiner can normally be reached on Mon. to Fri., 8:00 A.M. to 4:30 P.M.

44. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

45. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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